

Chapter 13: Improving Air Quality and Mitigating Pollution

13.1 The Council recognises that all development has some environmental impacts. Applicants will be expected to ensure that any negative effects of their development are mitigated as far as possible. The Council will expect applicants and developers to fully consider the impacts of their proposals through appropriate assessments which include the impact upon the environment, air quality, and public health and safety. This is of particular note as residential areas expand to meet previously distant or managed sources of air, noise, light, odour, or other pollution.

13.2 The NPPF details how the planning system should prevent both new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by unacceptable levels of pollution to ensure that new development is appropriate and sustainable for its location.

AIR QUALITY

13.3 The NPPF includes specific policies relating to air quality and Air Quality Management Areas (AQMA), alongside other national policies relevant to this topic. The national *Planning Practice Guidance (PPG)* on air quality provides guiding principles on how planning should consider the impact of new developments on air quality. This includes guidance on the role of Local Plans, how air quality should be addressed within planning applications, and the ways in which potential impacts can be mitigated. The Institute of Air Quality Management (IAQM) offers further guidance and best practice relating to air quality.

13.4 Three pollutants have been identified as potential threats to air quality in the Borough. These are Nitrogen Dioxide, Particulate Matter (PM10), Dust and Sulphur Dioxide (SO2). There are no AQMAs designated in the Borough, and industrial and residential land uses are largely separated thereby minimising potential instances of air quality conflicts. The main source of air pollution in the Borough is therefore traffic emissions, particularly along major routes and at key junctions which may not necessarily be in the vicinity of the contributing development.

13.5 Planning conditions may be used to manage and mitigate any effects of pollution and/or disturbance arising from development, in line with Policy INF2. Where required, conditions requiring the submission of Construction Management Plans will be imposed in order to ensure impacts on the environment and residential amenity are kept within acceptable limits and where possible reduced both during construction and during ongoing use and occupation.

13.6 Measures that could deliver improved air quality even when Air Quality Objectives are not being exceeded should be considered for major developments and developments which include education and health facilities or open space (including child play space). Damage Costs Assessments (DCA) should be undertaken for all development where an overall significant impact to local air quality is determined and requires an Air Quality assessment. Damage Costs are a set of impact values, measured per tonne of emission by pollutant, that estimate the societal costs associated with small changes in pollutant emissions. The Department for Environment, Food and Rural Affairs (DEFRA) and *The Essex Design Guide* provides guidance on damage cost calculations.

13.7 Poor air quality has well-documented adverse effects on health. The effects (including cumulative) of pollution on health, the natural environment or general amenity, and the potential sensitivity of the area or

proposed development to adverse effects from pollution, should be taken into account. It is therefore important to have regard to the legal requirements, objectives and targets set out in key pieces of legislation including:

- The *Air Quality Framework Directive 2008/50/EC* sets limits for air quality related to the following pollutants: Sulphur Dioxide; Nitrogen Dioxide and other oxides of Nitrogen; Particulate Matter (PM10 and PM2.5); Lead; Benzene; and Carbon Monoxide.
- The Government's *Air Quality Strategy for England (2023)* identifies a range of actions for both local authorities and central Government to take to improve air quality.
- The *Local Air Quality Management Framework*, as underpinned by the Environment Act 1995, sets local limits put into place through the *Air Quality (England) Regulations 2000* (as amended in 2002). The framework requires relevant local authorities to assess the quality of their air and, if it does not comply with relevant concentration limits, to put in place a plan to remedy the problem.
- Schedule 11 of the *Environment Act 2021* gives local authorities the responsibility to periodically review and assess local air quality and where air quality objectives are unlikely to be achieved, to designate Air Quality Management Areas (AQMAs).

13.8 The *Essex Air Quality Strategy* has been published by the Essex Air Quality Consortium and outlines a comprehensive plan for measurable improvements in air quality, supporting healthier lives and a sustainable future. The strategy, led by Essex County Council in partnership with 12 district, borough, and city councils, and two unitary councils, aims to improve air quality across Essex, enhancing public health and environmental sustainability.

13.9 As the type and location of new development will influence traffic generation, as well as the patterns and volume of vehicular movements, the Council will look to locate new development (particularly that which will generate a significant number of trips) to the most accessible locations as well as encouraging alternative modes of travel over private car use. It will also seek to mitigate the highway impacts of development by improving highway and junction capacity. This will help to prevent congestion which can lead to cars remaining idle or queueing in peak periods. Developers will be expected to contribute towards accessibility and junction capacity improvements.

13.10 Increasing risks to air quality should also be addressed through installation of non-combustion energy sources, and by ensuring the design of new development adopts appropriate energy efficient building techniques, contributing to a reduction of local greenhouse gas emissions and pollution levels.

ODOUR POLLUTION

13.11 Odour can be an important consideration when deciding the most appropriate location for development, particularly the separation of significant sources of odour from odour sensitive users.

13.12 There are four Water Recycling Centres (WRC) located within the Borough - in Basildon, Billericay, Wickford and Pitsea, which are identified on the Policies Map. In accordance with guidelines provided by Anglian Water, an advisory encroachment buffer exists around these centres, where additional scrutiny will be applied to determine if a development proposal is appropriate on a case-by-case basis. Where it is likely that the noise or odour from the water recycling centre will cause a nuisance/ loss of amenity to residents of the proposed development, the development is unlikely to be appropriate.

13.13 The buffer for sensitive development around Anglian Water WRCs vary according to risk assessments and are generally based on the population equivalent served. They will be larger (around 650m) for more strategic assets such as Basildon WRC which is also a

sludge treatment centre (identified in Policy 3 of *Essex and Southend-on-Sea Waste Local Plan 2017*). For sewer pumping stations a 15m encroachment buffer to any residential curtilage will generally be applied.

13.14 Whilst most non-residential uses are considered to be suitable within 400m of water recycling centres, there may be some uses which may be affected by odour, such as retail, takeaways, or schools, and which may therefore also not be appropriate within the 400m safety zone.

NOISE POLLUTION

13.15 Noise can constitute a statutory nuisance and is subject to the provisions of the Environmental Protection Act 1990 and other relevant law. Good acoustic design in line with British Standards and industry guidance can create quality residential and working environments. As the Borough has largely separated land uses, industrial/residential noise quality conflicts are not regarded a major problem, but this will need to remain a consideration as permitted development occurs incrementally over time as granted by the *Town and Country Planning General Permitted Development Order 2015*, as the Borough grows.

13.16 The Council expect development proposals to mitigate noise pollution through design considerations such as distance separation, orientation, layout of developments and appropriate materials to promote good acoustic design. Landscape buffers will be sought to mitigate against noise pollution where it is appropriate. These should be multi-functional and seek to deliver open space, ecological and surface water management benefits.

13.17 Provision of quiet external amenity areas is particularly important for the health and wellbeing of residents, and it is expected that developers will meet relevant standards and guidance.

LIGHT POLLUTION

13.18 The impact of light pollution in the Borough has become more apparent in recent times resulting from settlement growth and road infrastructure improvements. Light pollution obscures the night sky and amenity around many urban areas within England and can also have a disruptive impact on wildlife and habitats. At a local level light nuisances exist where a source of artificial light significantly and unreasonably interferes with a person's use and enjoyment of their property or is prejudicial to their health.

WATER POLLUTION

13.19 New development in the South Essex area is likely to impact on water quality owing to Essex being the driest county in England. This will require mitigation within new development. Water efficiency will be required in new developments, and Sustainable Drainage Systems (SUDS) must be secured as part of new development proposals in order to minimise impacts on water quality in line with Policy CC3.

POLICY AQMP1: Mitigating Environmental Pollution

To make sure that the natural environment, the quality of life and health and well-being of existing and future occupiers are not adversely affected by harmful pollutants and other negative impacts on the local environment, all development proposals must be located and designed to avoid significant adverse effects to the environment, and other sensitive receptors from pollution to land, air, water, or as a result of any form of disturbance. Assessment should also include the cumulative impact of the developments on the wider area.

Developments sensitive to pollutants will be expected to demonstrate that the proposal would not result in unacceptable impacts on users from air quality, odour, noise, light or water generating uses.

AIR QUALITY

An Air Quality Assessment must be submitted as part of a planning application for major development proposals.

The Air Quality Assessment must outline the measures to mitigate any adverse effects during construction and operation, individually or cumulatively on neighbouring uses and how proposals have considered ways to maximise benefits to local air quality. The assessment must be compliant with relevant emissions standards and have full regard to the Essex Air Quality Strategy 2025 or succeeding documents.

Where development proposals would be subject to unacceptable air quality standards or would have an unacceptable impact on air quality standards they will be refused.

ODOUR

An Odour Impact Assessment will be required as part of a planning application for developments which release odours or when a sensitive use is being proposed near to an existing odorous process. The application will be refused unless satisfactory mitigation measures can be applied.

NOISE

A Noise Impact Assessment will be required as part of a planning application for noise sensitive and noise generating development. The application will be refused unless satisfactory mitigation measures can be applied.

LIGHT

The Council will seek to limit light pollution from new development and proposals are expected to balance necessary lighting for operational and security purposes with prevention of light spillage and the effect on both the local environment, including wildlife, and on nearby local residents and their health and well-being.

WATER QUALITY

All proposals for development will be required to demonstrate that they will not have a negative impact on water quality through pollution of surface or ground water or the discharge and treatment of water originating from the development site.

Reasoned Justification

13.20 The 2023 Basildon Air Quality Management Plan Annual Monitoring Report shows there are six hotspots in Basildon where the legal limit for nitrogen dioxide at the roadside is still exceeded. Air quality will gradually improve over time, and the latest data shows a general reduction in nitrogen dioxide concentrations. However, we recognise further measures will now need to be considered to improve air quality further in these localised hotspots.

13.21 A business case has been submitted to the Major Road Network Fund for a proposed package of improvements.

Policy Links

- SG1 - Growth Needs
- SG2 - Settlement Hierarchy
- EMP6 - Locations for Employment Development
- R8 - Local Centres
- CC4 - Operational Energy and Carbon (Net Zero) in Homes and Buildings
- D2 - Major Developments - Design
- NE1 - Conserving and Enhancing the Natural Environment
- AQMP2 - Contaminated Land
- AQMP3 - Ensuring Health and Safety in Development
- STAT3 – Safe and Sustainable Access

Evidence Links

- Land-use Planning and Development Control: Planning for Air Quality - Institute of Air Quality Management (2017)
- Damage Cost Calculations - The Essex Design Guide (2021)
- Essex Air Quality Strategy - Essex Air
- Essex and Southend Waste Local Plan
- Basildon Air Quality Management Plan Annual Monitoring Report (2023)

Contaminated Land

13.22 As stated in the NPPF, planning policies and decisions should ensure that the site is suitable for its new use taking account of ground conditions and land instability, including from natural hazards or former activities of the land and pollution arising from previous uses. The NPPF advises that local planning authorities should consult the appropriate bodies when planning, or determining applications, for development around major hazards.

13.23 National policy places great importance on safeguarding the health of the environment and the public from contaminated land. Part IIA of the *Environmental Protection Act 1990* defines contaminated land as "any land which appears to the local authority in whose area it is situated to be in such a condition, by reason of substances in, on or under the land, that: (a) significant harm is being caused or there is a significant possibility of such harm being caused; or (b) pollution of controlled waters is being, or is likely to be caused".

13.24 With regards to contaminated land and the pollution of controlled waters the Environment Agency (EA) provides technical guidance on their website be followed for:

- Groundwater Protection,
- Land contamination risk management (LCRM) guidance; and
- Land Contamination.

13.25 Proposals for remediation of land should ensure that after remediation, as a minimum, land should not be capable of being determined as contaminated land under Part IIA of the *Environmental Protection Act 1990*. As such, the Council and the EA would encourage existing land affected by contamination be re-developed for the benefit of sustainability of the wider environment.

13.26 Where development is proposed on land which is likely to be contaminated, it is advised that a Preliminary Risk Assessment, prepared by a competent person, be submitted with the relevant planning application. To ensure the protection of controlled waters it may be necessary for this to be followed by intrusive site investigation and an options appraisal to assess whether remediation should be undertaken to ensure the protection of controlled waters.

POLICY AQMP2: Contaminated Land

For developments on, or near to, hazardous substance sites, or land which is contaminated or has a history of a potentially contaminating use, permission will only be granted where the Council is satisfied that:

1. There will be no threat to the health or safety of future users or occupiers of the site or neighbouring land; and
2. There will be no adverse impact on the quality of local groundwater or surface water.

Reasoned Justification

13.27 The NPPF requires planning policies and decisions to ensure that sites are suitable for their intended use taking account of ground conditions and land instability, including from natural hazards or former activities of the land, or pollution arising from previous uses. It would be inappropriate to grant any planning permission for development proposals to expand existing sites handling or processing hazardous substances where there may be effects on public safety. Similarly, granting new permission for new development on or near to locations where contamination is present would not be appropriate.

13.28 Amenity may be harmed where different uses come into conflict with one another, for example between heavy industrial and residential uses. It may also occur where a new residential development is poorly located, poorly designed, or constitutes over-development, resulting in a significant increase in disturbance to existing residents nearby.

Policy Links

- AQMP1 - Mitigating Air Quality and Wider Environmental Pollution Issues

Evidence Links

- Groundwater Protection - Environment Agency
- Land Contamination risk management - Environment Agency
- Land Contamination: technical guidance - Environment Agency

Health and Safety in Development

13.29 The Health and Safety Executive (HSE) provide planning advice to local authorities on developments which fall within the consultation zones of hazardous installations.

13.30 There is one identified major hazard located within the Borough, which is the former Transco Gas Holder in Archers Fields, Basildon. This installation has been redeveloped so that it is no longer as obvious from the surface, but the site continues to be regulated by the HSE in accordance with *Control of Major Accident Hazards (COMAH) Regulations 2015*.

13.31 In addition, within the Borough there are also underground High-Pressure Gas Mains, and a Liquid Fuel Transportation Pipeline. Each installation or pipeline has consultation zones around it which are determined by the HSE depending on the materials stored and technology operated at the site; these are periodically updated by the HSE.

13.32 When considering application for development in or near a hazardous installation or pipeline regard is given to the most up to date consultation zones. Where proposals fall within the HSE consultation zones for hazard installations or pipelines, then the Local Planning Authority will consult the HSE and/or have regard to any standing advice issued.

POLICY AQMP3: Ensuring Health and Safety in Development

Development proposals will be assessed in accordance with the Health and Safety Executive (HSE) Guidance where a new hazardous development is proposed, or where proposed development falls within a consultation zone for one or more hazardous installations. Where the HSE advises against development, planning permission will normally be refused.

Reasoned Justification

13.33 The NPPF requires planning policies and decisions to ensure that sites are suitable for their intended use taking account of ground conditions and land instability, including from natural hazards or former activities of the land, or pollution arising from previous uses.

Policy Links

- AQMP1 - Mitigating Air Quality and Wider Environmental Pollution Issues

Evidence Links

- Managing risks and risk assessment at work - Health and Safety Executive

Protecting High Quality Agricultural Land

13.34 The *NPPF* requires local planning authorities to consider the economic and other benefits of the best and most versatile agricultural land. Where significant development on agricultural land is demonstrated to be necessary, areas of poorer quality land should be used in preference to that of higher quality.

13.35 Agricultural land is classified into grades 1 to 5 with grade 3 being sub-divided into two further subgrades, 3a and 3b. Agricultural land that is classified as grades 1, 2 or 3a is considered to be the best and most versatile, with grades 3b, 4 and 5 of moderate to poor quality.

13.36 38.2% of land area in Basildon administrative area is agricultural land and agricultural buildings, which equates to 4,204 hectares (*Gov Official Statistics Land use in England, 2022*).

13.37 Natural England's Predictive Agricultural Land Classification Map 2026 for the Eastern region shows that there is some scattered Grade 2 and Grade 3a across the borough; with Grade 2 and Grade 3a located south of Billericay and Grade 3a located south of the Borough. Outside of the urban areas, the majority of agricultural land is Grade 3b.

13.38 When considering development proposals on agricultural land within the Borough, Natural England expect that regard is had to DEFRA's standing advice entitled 'Construction Code of Practice for the Sustainable Use of Soils on Construction Sites.'

POLICY AQMP4: Protecting High Quality Agricultural Land

Agricultural Land Classification site surveys are required for major development proposals affecting agricultural land excluding land marked on the policies map as H1-H30 or E1-E8.

Development of the best and most versatile agricultural land (grades 1 to 3a) shall be avoided to preserve local food security and provide opportunities for nature recovery.

Where proposals involve the loss of high-quality agricultural land applicants must demonstrate that:

1. the benefits of development clearly outweigh the impacts of the loss of the economic and other benefits of the land; and
2. every effort has been made to mitigate the overall impact of the development on best and most versatile agricultural land.

Reasoned Justification

13.39 Agricultural land is an important natural resource which is vital to sustainable development. The Agricultural Land Classification System was introduced in 1966, and it provides a framework for classifying land according to the extent to which its physical or chemical characteristics impose long-term limitations on agricultural use.

13.40 Natural England have produced Predictive ALC maps which detail what agricultural land is graded from 1 to 5 within the borough. As the map is only predictive at this stage, ALC site surveys are therefore required when development proposals are on grades 3a and b land to confirm the quality of the agricultural land.

13.41 This policy does not apply to land allocated for housing and/or employment growth (H1-H30 and E1-E8) as these have been identified as, on balance, the most sustainable locations for growth.

Policy Links

- D2 - Major Developments - Design

Evidence Links

- Agricultural Land Classifications Report - Basildon (2024)
- Guide to assessing development proposals on agricultural land - Natural England (2021)
- Construction code of practice for the sustainable use of soils on construction sites – DEFRA
- Land Use in England (2022)


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